

## REMARKS

### Amendment to the Specification:

Example 54 has been amended to correct "β" to "α" in the designation of the isomer at the 10-position. This clerical error is apparent from examination of the data given for this compound and comparison with data for other α- and β-isomers shown in the specification. The parameter that defines whether a particular isomer is an α-isomer or a β-isomer is the proton nuclear magnetic resonance (<sup>1</sup>H NMR) coupling constant (J) for the proton attached at C-10 (H-10). In Example 54, J=10.2 Hz for H-10 (page 62, Example 54, physical data, line 10). Comparison with Example 55 (an α-isomer) shows J=10.23 for H-10 (page 62, Example 55, physical data, line 9), whereas Example 53 (a β-isomer) shows J=6.70 for H-10 (page 63, Example 53, physical data, line 7). Comparison with other α- and β-isomers in the specification shows similar distinction. Thus it is clear to persons skilled in the art that the compound of Example 54 is the 10α isomer rather than the 10β, and correction is requested.

### Amendment to the claims:

Applicants have elected claims prior claims 16-23 and 28, as represented by the specific embodiment of Example 7, for prosecution in this application. The Examiner has added the compounds of formula I wherein Y represents a C-linked heteroaryl or heterocyclalkyl group. Thus, the elected subject matter of this application pertains to compounds, compositions, and processes relating to formula I wherein Y is represented by a C-linked heteroaryl or heterocyclalkyl group, or a group NR<sup>1</sup>R<sup>2</sup> wherein R<sup>1</sup> and R<sup>2</sup> together with the interjacent nitrogen atom represent an optionally substituted heterocyclic group.

In this application Applicants are pursuing compounds, compositions and processes related to the compounds of formula I wherein Y represents NR<sup>1</sup>R<sup>2</sup> wherein R<sup>1</sup> and R<sup>2</sup> taken together with the interjacent nitrogen represents an optionally substituted nonaromatic heterocyclic group. Applicants reserve the right to pursue canceled elected and non-elected subject matter in one or more future continuing and/or divisional applications.

Claims 16, 23, and 28-34 are pending in the application.

Independent claim 16 as amended is directed to compounds of Formula I in which Y represents a group  $NR^1R^2$ , where  $R^1$  and  $R^2$  together with the interjacent nitrogen atom represent an optionally substituted nonaromatic heterocyclic group.

As suggested by the examiner, claim 28 has been combined with claim 17 from which it formerly depended. It has also been revised to depend from claim 16 as currently amended.

New claim 29 is directed to compounds of claim 16 wherein said optionally substituted nonaromatic heterocyclic group is piperazinyl, morpholinyl, thiomorpholinyl, or morpholinosulphonyl.

New claim 30 is directed to the compound of claim 29 wherein said nonaromatic heterocyclic group is morpholinosulphonyl (also known as S,S-dioxothiomorpholinyl).

New claim 31 is directed to the compound of claim 30 which is  $10\alpha$ -(4'-(S,S-dioxothiomorpholin-1'-yl)-10-deoxo-10-dihydroartemisinin).

New claims 32-34 are directed to the compounds of claim 29 which are  $10\alpha$ -(4'-benzylpiperazin-1'-yl)-10-deoxo-10-dihydroartemisinin,  $10\alpha$ -(morpholino)-10-deoxo-10-dihydroartemisinin, and  $10\alpha$ -(1-(2-pyrimidyl)-piperazino)-10-deoxo-10-dihydroartemisinin, respectively.

No new matter is added and entry is respectfully requested.

Rejection under 35 USC 102(b):

Claims 16 and 23 have been rejected under 36 U.S.C. 102(b) over Jung et al., Heterocycles 45(6):1055-1058 (1997); Posner et al., WO 99/33461; McChesney et al., US Patent 5,225,562; Mai et al., STN International @CAPLUS Database, Accession No. 1997:526864, Tap Chi Hoa Hoc 35(1), 11-13, (1997), abstract. None of these references disclose or teach the artemisinin derivatives of the present invention wherein Y is  $NR^1R^2$  where  $R^1$  and  $R^2$  together with the interjacent nitrogen atom represent an optionally substituted nonaromatic heterocycle, and accordingly this rejection is moot.

The Commissioner is hereby authorized to charge any fees required as a result of this Amendment to Deposit Account 13-3372. A duplicate of this sheet is enclosed.

Supplemental Information Disclosure Statement:

Applicants hereby submit a Supplemental Information Disclosure as set forth in attached form PTO 1449.

The Commissioner is hereby authorized to charge any fees required as a result of this Supplemental Information Disclosure Statement to Deposit Account 13-3372. A duplicate of this sheet is enclosed.

For the foregoing reasons it is believed this application is now in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

A handwritten signature in cursive script that reads "Barbara A. Shimei".

Barbara A. Shimei  
Reg. No. 29,862  
Attorney for Applicants  
Bayer Pharmaceuticals Corporation  
400 Morgan Lane  
West Haven, CT 06516  
Phone: (203) 812-2786  
Fax: (203) 812-6459